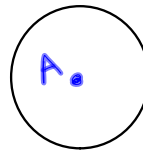


Ch 10 Circles

10-1 Use Properties of Tangents

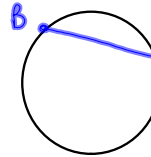
10-2 Find Arc Measures



Circle--the set of all points in a plane equidistant from a given point

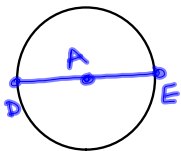
Center--given point

$\odot A$ circle A



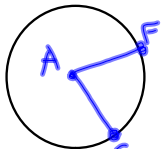
Chord--segment whose endpoints are on the circle

\overline{BC} is a chord



Diameter--chord that passes through the center

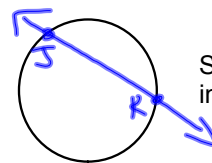
\overline{DE} is the diameter



Radius--segment whose endpoints are the center and a point on the circle

\overline{AF} is a radius

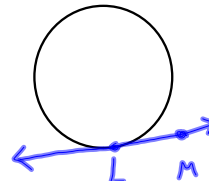
radii



Secant--line that contains a chord; intersects the circle in two points

\overleftrightarrow{JK} is a secant

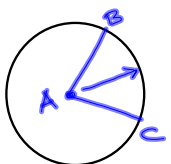
\overline{JK} is a chord



Tangent--line that intersects the circle in exactly one point

\overleftrightarrow{LM} is a tangent

L is the point of tangency

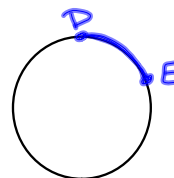


Central Angle--Angle whose vertex is the center and whose sides are radii.

$\angle BAC$ is a central \angle

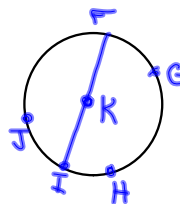
Central angle intercepts an arc.

$\angle BAC$ intercepts \widehat{BC}



Arc--part of the circle

\widehat{DE}



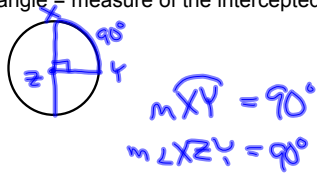
Minor Arc-- $< 180^\circ$ (2 letters)

Major Arc-- $> 180^\circ$ (3 letters)

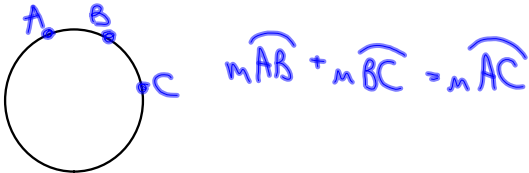
Semicircle-- 180° (3 letters)

\widehat{FG} \widehat{IH}
 \widehat{FHI}
 \widehat{FGI}

Measure of the central angle = measure of the intercepted minor arc



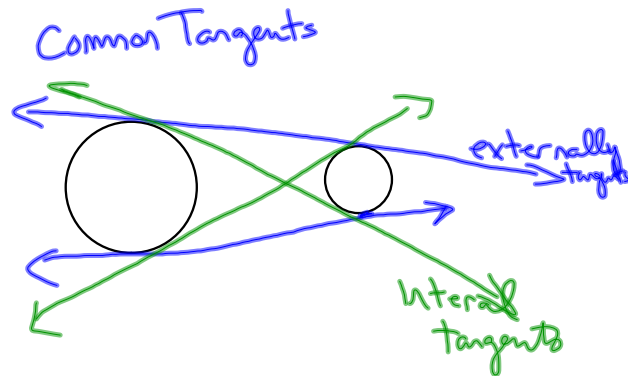
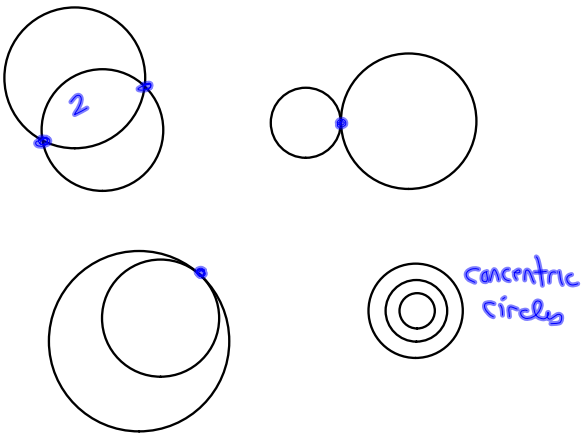
Postulate 23--Arc Addition Postulate--



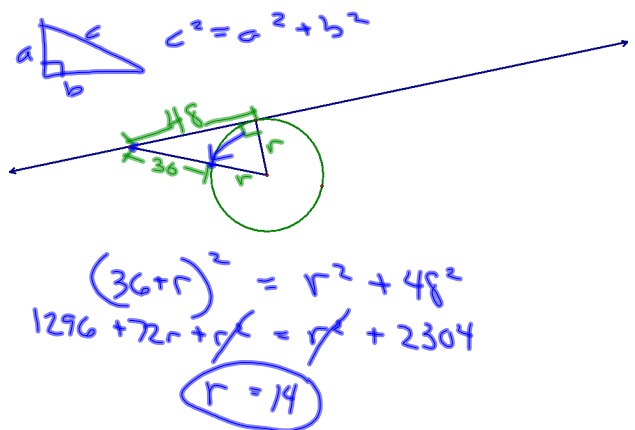
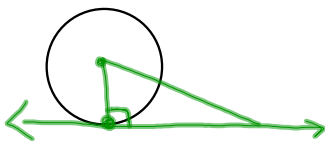
Congruent circles--circles with the same radius

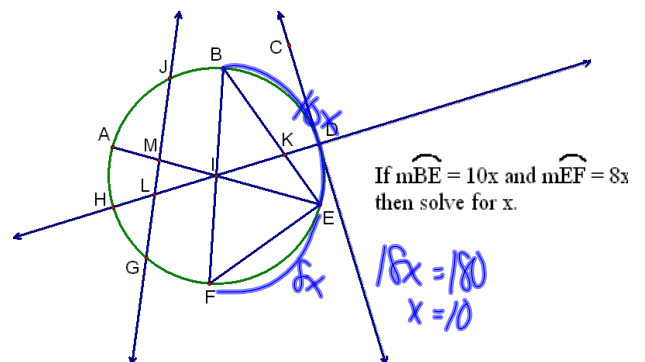
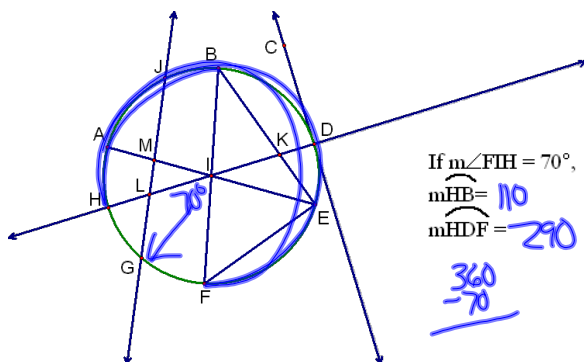
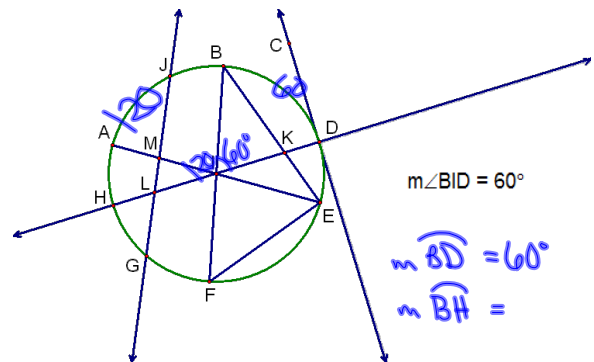
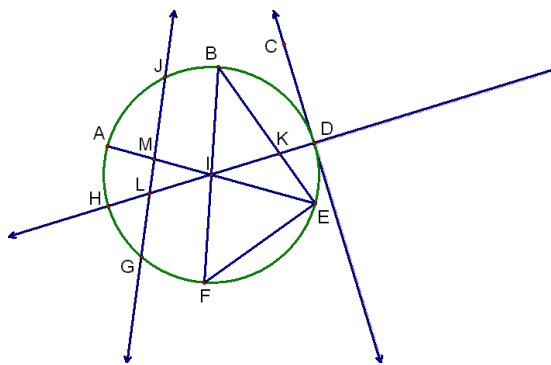
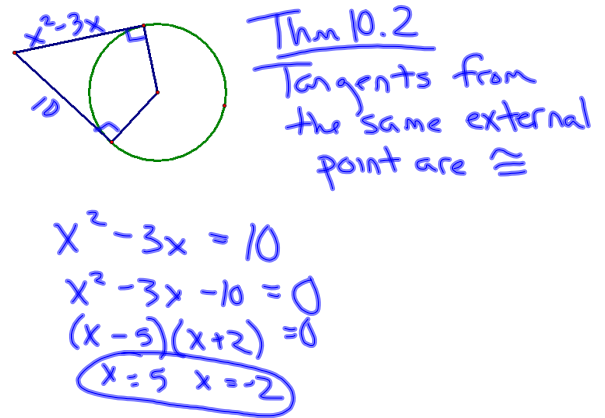
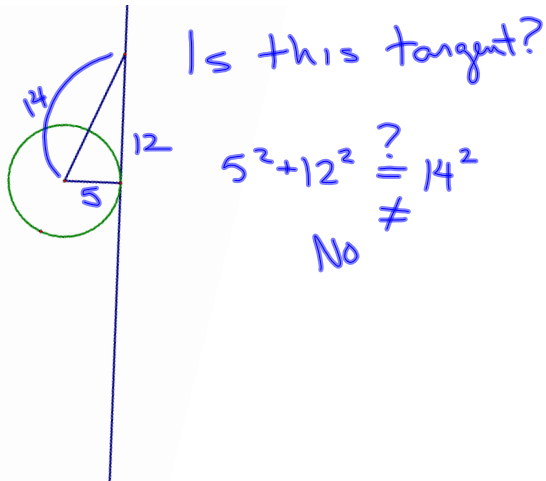


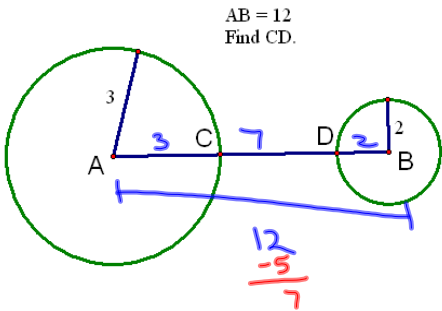
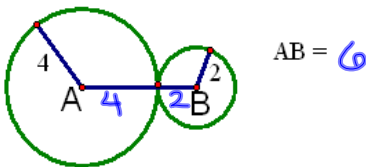
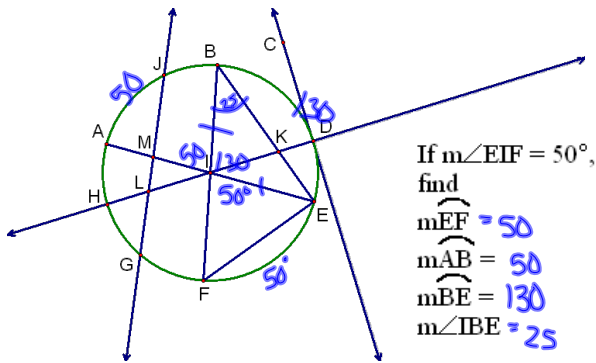
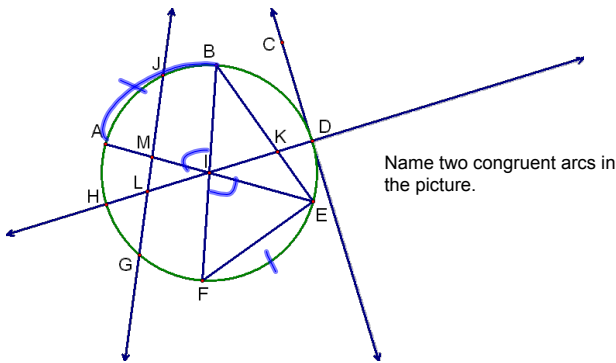
Congruent arcs--arcs with the same measure that are in the same circle or congruent circles



Theorem 10.1--In a plane, a line is tangent to a circle iff the line is perpendicular to a radius of the circle at its endpoint on the circle







HW
p655-657
#s 3-10, 15-22, 25
p661-662
#s 3-10, 21 (hint sohcahtoa)